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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/877,928
Filing Date: June 07, 2001
Appellant(s): JENSEN ET AL.

Robert V. Racunas
Reg. No. 43,027
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/28/07 appealing from the Office action mailed 7/28/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. The rejection of claims 1-18 under 35 U.S.C. § 112, second paragraph, presented in the Final Rejection of 7/28/06, were withdrawn in light of the amendments presented in the after final amendment of 9/28/06.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Burns	US 5,991,306	Nov. 23, 1999
Tso	US 6,421,733	Jul. 16, 2002 (filed Sep. 8, 1997)

WinRoute Pro 3.0 User's Manual, Tiny Software Inc., 1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2-5, 7, 8-12, 14-16, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (U.S. Patent No. 6,421,733, hereinafter "Tso") and WinRoute (WinRoute Pro 3.0 User's Manual) and Burns et al. (U.S. Patent Number 5,991,306; hereinafter Burns).

In considering claim 1, Tso discloses a method to retrieve information, comprising:

receiving a first request for information from a client over a first connection (i.e. client makes a request to a "transcoding server," col. 3, lines 12-13, 18-23);

establishing a second connection to retrieve said information; (i.e. transcoding server retrieves it from an Internet content server, col. 3, lines 41-43);

retrieving said information over said second connection (i.e. transcoding server retrieves it from an Internet content server, col. 3, lines 41-43);

receiving a second request for said information over a third connection (i.e. client will make a second request for the information);

determining whether said second request matches said first request, including whether said second request is from said client (col. 5, lines 36-40, describing checking the cache in response to a second request based on "information," col. 7, lines 21-38, describing that the "information" can be information about the "network client," including "user identity"); and

sending said information over a third connection to said first network node in accordance with the determination (col. 3, lines 41-44).

See also, col. 6, lines 9-50, describing various steps of the claimed invention.

Tso disclosed the invention substantially as claimed however, Tso failed to specifically recite detecting that said first connection is terminated prior to retrieval of said information. Nonetheless it was widely known in the art at the time of the invention

for proxy devices to detect the termination of such *first* connections, as evidenced by WinRoute. In an analogous proxy system, WinRoute disclosed caching requested client content at a proxy device (WinRoute pg 54). WinRoute's system further provides various features for configuring the proxy caching functionality. One feature includes detecting when a first connection (connection between client and proxy) is terminated (e.g. a browser's stop button is pressed) prior to the retrieval of content over a second connection (connection between the proxy and content server) (WinRoute pg 55 – Continue Aborted). When termination of the first connection is detected the system downloads the requested content over the second connection and transmits it to the user at a later time using a third connection (e.g. a new connection between the client and proxy requesting the content again) (WinRoute pg 55 – Continue Aborted). WinRoute disclosed that by continuing to download the requested content over the second connection even when the first connection is terminated the system is able to provide faster browsing for users since when the user returns to this page later it will be presented from the cache without the added step of first retrieving the data from a content server (WinRoute pg 55 – Continue Aborted). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the WinRoute "Contiue Aborted" feature within Tso's system, in order to provide faster browsing for users. Again, the browsing will be faster since when the user later returns to a requested page it will be presented from the proxy cache without the added step of first retrieving the data from a content server.

Neither Tso nor WinRoute disclosed deleting said information upon delivery of said information to said client. Nonetheless it was widely known in the art at the time of Applicant's invention that proxy caches such as those employed by both Tso and WinRoute have limited capacity, as evidenced by at least Burns. In an analogous proxy cache system (see inter alia Figure 2) Burns disclosed, "deletion policies are a function of...the constraints imposed by capacity limitations of the cache memory" (see Burns Col 11, lines 15-19). Thus, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to implement a cache deletion policy in the combined Tso and WinRoute system which deletes requested information from the proxy cache upon delivery of said information to a client, in order to manage the capacity limitations of the cache memory by deleting undesired content as soon as possible and thus more efficiently utilizing the cache memory. The cache memory is more efficiently utilized since more users can have their requests cached when cache memory is freed up as soon as possible. In addition by caching more users' requests the system is able to more efficiently respond to the requests.

In considering claim 8, claim 8 describes the same method as claim 1, but discloses which devices in the system are performing the claimed steps. These devices are the same as taught by Tso and disclosed above.

In considering claim 15, claim 15 presents an article with a storage medium and instructions for performing the same steps as claim 1, and is thus rejected for the same reasons as claim 1.

In considering claims 2, 9, and 16, Tso further discloses that the first request comprises a first source information (i.e. client's user ID, modem/interface information, etc.) and a first information address (i.e. the URL of the remote server), further comprising storing said information with said first source address and said first information address in an information table prior to receiving the second request (col. 4, lines 1-5, 50-65 describing storing the information and destination URL in the cache; col. 7, lines 20-29, describing storing the source information). Note that Tso describes storing a client's user ID and/or modem or interface information in the with the information and information address. Although the cited sections do not say so, detecting an IP address upon receiving a request is a common way to determine which client or user is making the request. Tso discloses this in col. 10, lines 8-32, which describes storing the client's IP address in a separate table for authentication purposes. Thus, it would have been obvious for the client's "user ID" stored in the information table taught by Tso to consist of the client's IP address, to simplify the process of recognizing the user.

In considering claims 3 and 17, Tso further discloses that the second request comprises a second source information (i.e. client user ID, modem information, etc.)

and a second information address (i.e. the server URL), and said determining comprises:

Searching said information table to determine whether the second source information matches the first source information (i.e. determining the client user ID, etc. and comparing it with the stored information); and

Determining whether said first information address matches said second information address (i.e. the proxy determines whether the requested URLs are the same to determine whether to use the cached data).

Again, given Tso's teaching of using IP addresses to identify clients, it would have been obvious for the client's "user ID" stored in the information table taught by Tso to consist of the client's IP address, to simplify the process of recognizing the user.

In considering claim 4, Tso further discloses that the source addresses comprise Internet addresses ("IP addresses") and the information addresses comprise uniform resource locators ("URLs").

In considering claims 5 and 12, Tso further discloses that the information is an HTML file (col. 3, line 54, "HTML").

In considering claim 7, 14, and 18, Tso further discloses receiving a request to terminate said third connection (inherent after an HTTP request and retrieval of data),

and terminating the second and third connections (again, inherent in completing the data transfer).

In considering claim 10, Tso further discloses that the second request comprises a second source information (the client user ID, etc. and comparing it with the stored information) and a second information address (i.e. the server URL), and said determining comprises:

Searching said information table to determine whether the second source information matches the first source information (i.e. determining the client user ID, etc. and comparing it with the stored information); and

Determining whether said first information address matches said second information address (i.e. the proxy determines whether the requested URLs are the same to determine whether to use the cached data, p. 24, ¶ 3-4); and

Sending the information in accordance with said determination (i.e. the proxy sends the information from the cache if the URLs match).

Again, given Tso's teaching of using IP addresses to identify clients, it would have been obvious for the client's "user ID" stored in the information table taught by Tso to consist of the client's IP address, to simplify the process of recognizing the user.

In considering claim 11, Tso further discloses that the source addresses comprise Internet addresses ("IP addresses") and the information addresses comprise uniform resource locators ("URLs").

Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso and WinRoute and Burns, in view of well-known Internet standards.

In considering claims 6 and 13, although Tso does not disclose that the information comprises an XML file, Examiner takes Official notice that XML is a notoriously well-known language for files on the Internet. Given this knowledge, it would have been obvious to use XML in the system taught by Tso, in addition to or instead of HTML, because XML has numerous advantages over HTML (such as creation of customized tags, supporting links that point to multiple documents, etc.).

(10) Response to Argument

Regarding claims 1, 2-5, 7-12 and 14-16, of which claims 1, 8 and 15 are independent, Appellants present no separate arguments directed to the dependent claims encompassed by this rejection. Additionally, Appellants present no substantive arguments directed to the separate patentability of dependent claims 6 and 13, rejected under separate grounds.

Regarding independent claims 1, 8 and 15, argued collectively, Appellants presents one principal argument:

Appellants argue that "Tso, WinRoute and Burns each describe a caching mechanism and thus teach away from deleting information upon delivery" (Remarks, 12) and that "the modification of cache memory as proposed by the Examiner would

change the principle of operation of the cited references and render the cited references unsatisfactory for their intended purposes" (Remarks, 13).

Regarding argument a), the Examiner respectfully disagrees. While Tso, WInroute and Burns do describe a caching mechanism, mere disclosure of a caching mechanism which stores some cached items after delivery does not teach away from deleting other cached items immediately upon delivery to a client.

Tso contains limited teachings relating to deletion of cached content, stating only that the cache may "invalidate any non-locked object at any time" (col. 4, ll. 40-43). Likewise, WinRoute states only that caches objects are deleted when the cache size exceeds a predetermined limit (p. 55, ¶6). Burns, on the other hand, describes numerous cache expiration policies (col. 10, l. 48 to col. 11, l. 19). In particular, Burns teaches that deletion policies may be the function of "the content itself", "the subscriber patterns", and "constraints imposed by capacity limitations" (col. 11, ll. 15-19). Burns also teaches that certain types of content, such as those rarely or infrequently requested, are less desirable to cache.

When considering a cache deletion policy for a proxy that retrieves aborted client requests for subsequent retrieval, as taught by the combination of Tso and WinRoute, one of ordinary skill in the art would have been led by Burns to consider various factors such as the type of content, subscriber patterns, and the constraints imposed by the cache size. At least some of the aborted client requests would have contained content "rarely or infrequently requested" that would not normally be subject to caching (Burns; col. 10, ll. 54-55).

One of ordinary skill in the art, when considering the combined teachings of Tso, WinRoute and Burns would have seen a benefit to caching content associated with aborted requests (i.e., makes it quicker to explore a web site; WinRoute p.55, ¶7) and deleting, upon delivery to the client, at least the content that would not normally be cached since it is requested rarely or infrequently. Caching the content associated with an aborted request until the client retrieves it reduces network traffic resulting from numerous aborted requests for the same content (particularly common where high latency gives the user the perception that a web page has stopped loading), while deleting unwanted content ensures that the cache space is not occupied by content that is rarely or infrequently requested. Deleting the content immediately upon delivery is a merely a predictable variation of known cache deletion policies, and one which a person of ordinary skill in the art could have easily implemented.

The Examiner additionally notes that Appellants have not presented any specific arguments directed to the combinability of Tso, WinRoute and Burns, presenting only a general statement of the requirements of a *prima facie* case of obviousness. Accordingly, the combinability of the cited references will not be discussed in further detail.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Aaron Strange

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